

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions, and listings, of claims in the above-identified patent application:

LISTING OF CLAIMS:

1. (Currently Amended) A perpendicular magnetic recording medium comprising:

at least a first and a second perpendicular magnetic recording layer; and

a substrate supporting the first and the second perpendicular magnetic recording layers,

wherein the first and the second perpendicular magnetic recording layers have ~~different physical/magnetic properties and are formed of materials that compensate the different physical/magnetic properties~~ crystalline structures and the first perpendicular magnetic recording layer has smaller crystal grains and lower perpendicular magnetic anisotropic energy (Ku) than the second perpendicular magnetic recording layer.

2-12. Canceled.

13. (Original) The perpendicular magnetic recording medium of claim 1, wherein the perpendicular magnetic recording layers have magnetic domains that are physically disconnected from one another.

14-17. Canceled.

18. (Original) The perpendicular magnetic recording medium of claim 1, wherein both the first and second perpendicular magnetic recording layers are formed of at least one alloy selected from the group of a CoCr alloy, a NiFe alloy, a FePt alloy, an Fe alloy, a Co alloy, a Ni alloy, a Pd alloy, a Pt alloy, and an alloy containing at least one material selected from Nd, Pd, Ru, B, and Nb.

19. (Original) The perpendicular magnetic recording medium of claim 1, wherein at least one underlayer is placed between the substrate and one layer of the first and second perpendicular magnetic recording layer.

20. (Original) The perpendicular magnetic recording medium of claim 19, wherein the underlayer is formed of an alloy containing either one material or at least two materials selected from Pt, Au, Ag, Pd, Ti, Ta, B, Nb, Co, Fe, Ni, Cu, Mo, Ru, Ta, C, Oxide, and Si.

21. (Original) The perpendicular magnetic recording medium of claim 1, wherein both the first and second perpendicular magnetic recording layers are formed of either a CoCrPt alloy or CoCrPtX (X = B, Nb, Ta, O, or C) alloy, and the first perpendicular magnetic recording layer contains 10% or more Pt, while the second perpendicular magnetic recording layer contains 10% or less Pt.

22. (Original) The perpendicular magnetic recording medium of claim 1, wherein the first perpendicular magnetic recording layer is formed of a CoCrPt alloy,

and the second perpendicular magnetic recording layer is formed of CoCrPtX (X = B, Nb, Ta, O, or C) alloy.

23. (Original) The perpendicular magnetic recording medium of claim 1, wherein the first perpendicular magnetic recording layer is formed of a CoCrNbPt alloy, and the second perpendicular magnetic recording layer is formed of a CoCrBPt alloy.

24. (Original) The perpendicular magnetic recording medium of claim 1, wherein the first perpendicular magnetic recording layer is formed of a CoCrPt alloy, and the second perpendicular magnetic recording layer is formed of CoCrBPt alloy.

25. (Original) The perpendicular magnetic recording medium of claim 1, wherein the first perpendicular magnetic recording layer is formed of a CoCrPt alloy, and the second perpendicular magnetic recording layer is formed of a CoCrNbPt alloy.

26. (Original) The perpendicular magnetic recording medium of claim 1, wherein both the first and second perpendicular magnetic recording layers are formed of an CoCrPt alloy, but the composition of a CoCrPt alloy for the first perpendicular magnetic recording layer is different from the composition of a CoCrPt alloy for the second perpendicular magnetic recording layer.

27. (Original) The perpendicular magnetic recording medium of claim 1, wherein both the first and second perpendicular magnetic recording layers are formed of an alloy containing Co, Cr, and Pt.

28. (Original) The perpendicular magnetic recording medium of claim 1, wherein one of the first and second perpendicular magnetic recording layers is formed of an alloy containing CoCrPtX (X = B, Nb, Ta, O, and C).

29. (Original) The perpendicular magnetic recording medium of claim 1, wherein each of the first and second perpendicular magnetic recording layers has a thickness of 50nm or less.

30. (Original) The perpendicular magnetic recording medium of claim 1, wherein total thickness of the first and second perpendicular magnetic recording layer is less than 200nm.

31. (Currently Amended) The perpendicular magnetic recording medium of claim 1, wherein both the first and second perpendicular magnetic recording layers have a lattice ~~matching~~ structure, and the lattice structures of the first and second perpendicular magnetic recording layers match.

32. Canceled.